

REMARKS

CLAIMS

35 U.S.C. § 112 ¶ 2 Rejection of Claim 3

The Office Action rejected Claim 3 under 35 U.S.C. §112 ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 recites the limitation "the biodegradable metal" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 has been amended to recite a "biodegradable metal" to give antecedent basis for the feature in Claim 3.

The Examiner is requested to withdraw the 35 U.S.C. § 112 ¶ 2 Rejection of Claim 3. In light of the foregoing amendment, the Examiner is respectfully requested to allow Claim 3.

35 U.S.C. § 102(b) Rejection of Claims 1, 2 and 4 - 14

The Office Action rejected Claims 1, 2 and 4 - 14 under 35 U.S.C. 102(b) as being anticipated by Igaki (EP 1033145 A1). The Office Action states Igaki discloses in paragraphs [0032] to [0036] the features of Claim 1.

Applicants have amended Independent Claim 1 to include the feature "wherein the SMP material is selected from the group consisting of covalent polymer networks and covalent polymer interpenetrating networks".

Even though Igaki discloses in paragraph [0036] "cross-linked polymer molecules", it is clear from the disclosure that non-covalent (physical) crosslinks must be meant therewith. This is clear from the extrusion process described in paragraph [0033], which is cited in paragraph [0036]. As is well known to a person skilled in the art, a covalent network has no melting point T_m and therefore cannot be melted and extruded. To the contrary, a covalent network material will decompose before melting. Therefore the polymers disclosed by Igaki must be thermoplastic polymers with non-covalent (physical) crosslinks.

This difference is also described in the Specification, as filed, on page 18, first paragraph (thermoplasts) and second paragraph (covalent networks, clear from "cross linking reaction of the macromers"). Thermoplastic smps having physical network points are also described on page 11, fifth paragraph of the Specification, as filed.

The preferred covalent polymer networks are disclosed beginning at page 12, second paragraph and interpenetrating networks at page 15, third paragraph. These networks are favorable for the reasons beginning at page 17, third paragraph.

The Examiner is requested to withdraw Igaki (EP 1033145 A1) as a 102(b) Prior Art reference. In light of the foregoing arguments, the Examiner is respectfully requested to allow Claims 1, 2 and 4 - 14.

35 U.S.C. § 103(a) Rejection of Claims 1 and 3

The Office Action rejected Claims 1 – 14 under 35 U.S.C. 103(a) as being unpatentable over Harder *et al.* (US 2004/0098108) in view of Steinke (US 20020103526). The Office Action states “Regarding claims 1 and 3, Harder *et al.* disclose a self-expanding stent comprising a magnesium alloy, pure magnesium, or a composite of magnesium or a magnesium alloy with biodegradable polymer (paragraph 14). Steinke discloses that it is well known that magnesium alloys are biodegradable (paragraph 37). Therefore, it would have been obvious to one of ordinary skill in the art that the magnesium alloy stent of Harder *et al.* would also be biodegradable.”

Applicants disagree that the combination of references disclose “each and every” feature of the Claims 1 and 3, and Traverse.

Claim 1 is an independent claims and has at least the following features:

1. a biodegradable SMP material
2. SMP material is a covalent polymer network or a covalent polymer interpenetrating network.

Claim 3 is dependent from Claim 2, which in turn is dependent from Claim 1. In addition to have the features of Claim 1, Claim 3 has at least the following features:

1. the stent comprises a basic structure of a biodegradable plastic material or a degradable metal coated by SMP material
2. the degradable metal is a magnesium alloy, pure magnesium, or a composite of magnesium or a magnesium alloy with biodegradable polymer.

A review of the disclosures of Harder *et al.* and Steinke shows that neither of the references disclose a biodegradable SMP material as in Claim 1. It is unclear from the Office Action if it is alleging that the disclosure of a “self-expanding stent” in Harder *et al.* is supposed to be the equivalent of a Shape Memory Polymer. If this is in fact true, then the Applicants want to stress that a self-expanding stent is not the same as a Shape Memory Polymer, which has a “memory” and can transition between two different shapes in both directions. Harder *et al.* does not disclose that the stent can revert back to the unexpanded form.

Claim 3 has the additional feature of the “degradable metal coated by SMP material”. Neither, Harder *et al.* or Steinke disclose a Shape Memory Polymer coating the degradable metal.

The combination of Harder *et al.* (US 2004/0098108) and Steinke (US 20020103526) does not disclose “each and every” feature of Claims 1 and 3.

The Examiner is requested to withdraw Harder *et al.* (US 2004/0098108) in view of Steinke (US 20020103526) as 103(a) Prior Art references. In light of the foregoing arguments, the Examiner is respectfully requested to allow Claims 1 and 3.

Conclusion

Claims 1 – 14 are pending. Claims 1 – 13 are Currently amended. Claim 14 is Previously presented.

In view of the foregoing, Applicants respectfully request reconsideration and timely allowance of the pending claims. Additionally should the Examiner feel that there are any issues outstanding after consideration of this response; the Examiner is invited to contact Applicants’ undersigned representative to expedite prosecution.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1349. If a fee is required for an extension of time under 37 C.F.R. § 1.136 that is not accounted for in the enclosed transmittal, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Dated: April 7, 2009

By: /KOH/

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